

work of the meeting will be relieved by congenial entertainment. The way in which the various authorities, as well as private individuals, are contributing to make matters run smoothly, and to ensure that the delegates shall remember their visit with pleasure, is a noteworthy characteristic of the arrangements.

NOTES.

IT appears that the Bement collection of minerals, which became the property of the American Museum of Natural History at the end of last year, was presented to the museum by Mr. J. Pierpont Morgan. The collection is estimated to be worth about 40,000*l.*, and was commenced by Mr. C. S. Bement, of Philadelphia, who began it thirty-five years ago and kept adding to it until it passed from his possession. Neither time nor money was spared in gathering desirable specimens, and in 1884 the Bement collection was looked upon as so important as to be made the subject of a special report in the interest of the National Museum, Washington. Mr. Morgan's public spirit and generosity have prevented the collection from being distributed or from leaving the United States. In addition to this gift, he has presented to the museum the Tiffany collection of gems. Mr. Morgan's earlier contributions to the museum, of which he is a trustee, have been on a munificent scale, but the recent gifts surpass previous ones in value and scientific interest. Referring to the gifts at a recent meeting of the Board of Trustees, Mr. A. S. Hewitt remarked:—"The trustees rejoice that the museum begins the new century with the acquisition of two very remarkable, if not unique, collections of minerals, which, added to the treasures already in its possession, raise its position among the museums of the world to the level occupied by the British Museum, heretofore, by common consent, regarded as rich beyond comparison in rare specimens.

WITH reference to the recent proposal to stock the London parks with butterflies, Prof. Meldola writes to say that the experiment, although worth trying, is not, in his opinion, likely to prove successful. The species which have been observed in the Metropolis are, with the exception, perhaps, of *Pieris rapae*, only casual visitors, for the most part imported and only occasionally immigrating spontaneously. It is very doubtful whether the species which it is proposed to introduce, viz. the *Vanessas*, would survive more than the first season, and if any should escape the London sparrow and hibernate it is more than probable that they would voluntarily migrate the following spring to fresher surroundings than could be offered by a vegetation which had gone through the ordeal of a London winter. Prof. Meldola adds that in the year 1871 he perfectly well remembers the leopard-moth, *Zeuzera aesculi*, being quite common on the tree-trunks in the London parks and squares. It was observed during that season that the ground at the foot of the trees was often littered with wings of the moth, as though some bird—probably the sparrow—had been at work among the insects. If the suggestion to stock the parks necessitated an annual renewal of the butterflies, it would be better to leave them in their native country haunts.

It is stated that the Cunard Company contemplate utilising the Marconi wireless telegraph on their Atlantic steamers.

MR. C. E. BORCHGREVINK, the Antarctic explorer, has been created a Knight of the Order of St. Olaf by King Oscar.

MR. J. WILSON, U.S. Secretary of Agriculture, has arranged to carry into effect, on July 1, the reorganisation of certain of the divisions of the Department of Agriculture, as provided by the last Congress. It may be remembered that, in addition to the Weather Bureau and the Bureau of Animal Industry, four new bureaus were created, namely, those of Plant Industry, of Forestry, of Chemistry and of Soils.

NO. 1642, VOL. 63]

WE learn from *Science* that an influential committee has been formed in Italy to celebrate the fortieth anniversary of Prof. Paul Mantegazza's entrance on his career as a teacher. This event will be celebrated at Florence on April 30, and at the same time as the thirtieth anniversary of the Italian Society of Anthropology. It is proposed to collect a sum of money to be used for the endowment of the new laboratory of anthropometry which Prof. Mantegazza has established at Florence.

THE Rome correspondent of the *Times* records the opening, by Lord Currie, of the British Archaeological School in Rome. More than one hundred representatives of international archaeology gathered at the Palazzo Odescalchi, where the school is situated, the Italian Government being represented by Commendatore Fiorilli, Director-General of Antiquities and Fine Arts, the Academia dei Lincei by several members, the German Archaeological Institute by Profs. Petersen and Hülsen, and the French École de Rome by Mgr. Duchesne.

SEVERAL papers on scientific aspects of alcoholism were read at the International Temperance Congress held at Vienna last week. Among the subjects described and discussed were the effect of small fixed quantities of alcohol on the speed and quality of certain simple and calculable mental operations, such as sums in addition, and committing figures to memory; the poisonous effects of alcohol in certain nervous affections; the effect upon the power of resistance to disease; remedial measures; and reforms recently introduced into the French Army for the repression of alcoholism.

IT has been decided (says the *Victorian Naturalist*) that the National Fund raised in memory of the late Baron von Mueller, Government Botanist of Victoria, shall be devoted to the institution of a medal and prize to be awarded at intervals of not less than two years to the author of the most important contribution to natural knowledge which shall have been published in the British dominions not more than five years, or less than one year, prior to the date of the award, preference being given to work having special reference to Australasia. It is proposed that the Mueller Medal shall be awarded by a committee of the Australasian Association for the Advancement of Science appointed for the purpose every two years.

FROM the *Victorian Naturalist* we understand that Prof. Spencer, F.R.S., of the Melbourne University, and Mr. F. J. Gillen, of South Australia, will start from Oodnadatta, the present terminus of the transcontinental railway, nearly 700 miles north of Adelaide, on their expedition for the purpose of studying the habits and customs of the aboriginals of the northern portion of Central Australia, about the middle of the present month. The start has been somewhat delayed owing to the drought which has existed for some time in the portion of the continent to be visited. It is also proposed to cross into Queensland and continue Dr. Roth's ethnological work, and afterwards to traverse some of the larger rivers of the Northern Territory, and if time permit, to visit the Wyndham district on Cambridge Gulf in North-West Australia.

A COMMITTEE, to be known as the Lightning Research Committee, has been organised by the Royal Institute of British Architects and the Surveyors' Institution, with the object of collecting and tabulating information from all parts of the country as to damage resulting to buildings from lightning. The committee includes Mr. John Slater (chairman), Major-General E. M. Festing, C.B., F.R.S., Dr. Oliver Lodge, F.R.S., Messrs. J. Gavey, W. P. Goulding, W. N. Shaw, F.R.S., H. H. Statham, A. R. Stenning, Arthur Vernon, Killingworth Hedges, C.E. (hon. secretary). In pursuance of their inquiry the committee seek the co-operation of competent observers in all parts of the country, with a view to obtaining accurate

details, noted on the spot, of the effect of lightning-strokes on buildings, whether fitted with conductors or not. Persons willing to assist by their observations are invited to communicate with the secretary at the offices of the Royal Institute of British Architects, 9 Conduit Street, London, W.

WE learn from the *British Medical Journal* that in the course of the present year a statue of Pasteur is to be erected in the town of Dôle, in the Jura Department, which was his birth-place. The statue, which is from the chisel of M. Antonin Carlès, is in bronze, and stands on a conical pedestal 8 metres high. Pasteur is represented as standing in an attitude of meditation. At the base of the monument is a group representing Humanity holding out two children to Pasteur, whilst Science offers him a palm.

THE death is announced in the *Times*, at the age of ninety-three years, of Prof. Paul Chaix, a well-known citizen of Geneva and a geographer of distinction. In 1836 he was appointed master of geography and history in the Industrial College of Geneva, and in 1868 he became professor at the Gymnasium, and a few years later at the University. M. Chaix was an active member of the German Geographical Society, and an honorary corresponding member of the Royal Geographical Society. He was the author of a map of Savoy, a history of Central America, various elementary geographical works, and papers to geographical and other journals.

THE Paris correspondent of the *Chemist and Druggist* announces the death, at Grenoble, of Prof. F. M. Raoult, an eminent chemist and senior of the Faculty of Sciences of that town. He was a corresponding member of the Paris Academy of Sciences, a foreign member of the Chemical Society, London, and of the Imperial Academy of St. Petersburg, and a Commander of the Legion of Honour. M. Raoult was 71 years of age, and held a high place amongst French chemists. The death is also announced of M. Maxime Cornu, a well-known French botanist, who took a leading part in the endeavours to eradicate phylloxera in France. The deceased was a professor at the Paris Museum of Natural History, and contributed largely to the literature of botany.

IT is a matter for congratulation that serious efforts are being made by the municipal authorities in many civilised countries to combat disease by all means available for that purpose. We therefore welcome the news that an excellent institution for the exclusive treatment of patients suffering from the various forms of cancer—either curable or incurable—is being built in Moscow at the expense, which is said to be an enormous one, of the municipality of that city. It is understood, however, that the main object of erecting this special hospital is to provide the necessary means of studying the nature of cancer from every possible point of view and of enabling and encouraging more thorough pathological and clinical research to be carried out in connection with that malady. Accordingly, we may reasonably hope that by carefully conducted scientific investigations the light of knowledge will be thrown upon a scourge which has, of late years, and particularly in the northern regions of the Russian Empire, assumed a most formidable extent and character. It may be added that the new institute will be under the entire management of a committee consisting of several members of the medical faculty, with Dr. Lewschin, professor of surgery in the University of Moscow, as its director. In addition, facilities will be offered to students who, desirous of joining the scientific circle of investigators there, have already proved themselves efficient workers in that department of pathological research.

THE very alarming reports which were published by the German Press towards the end of March concerning both the extent and rapidity with which the recent outbreak of an

epidemic of enteric fever in Upper Silesia had spread throughout that country, and particularly the serious complications and the high rate of mortality by which it was followed, have prompted the Prussian "Cultusminister" to request Prof. Robert Koch to proceed at once to that part of the German Empire for the purpose of ascertaining the original source of the infection and of adopting some trustworthy measures to check its further present spread, and to prevent, as far as possible, its occurrence in the future. Prof. Koch, it is reported, will now leave Berlin for Beuthen, which is situated near the Polish frontier, where he will, in the first instance, examine the so-called "hygienic station," which was erected there for bacteriological purposes some years ago, whence he will proceed to the other more important places and towns of Silesia with a view to inspecting carefully their present sanitary conditions. It is believed that Prof. Koch will be engaged on his mission for from six weeks to two months; subsequently his report, which, it is understood, will cover all the main points of his bacteriological investigations bearing upon enteric fever, will be published by the Reichsgesundheitsamt of Berlin.

REPRESENTATIVES of several societies interested in archæology met Sir Edmund Antrobus on Friday last at Stonehenge to discuss the details of the resolutions passed at the recent conference in London, and referred to in our last issue (p. 576). The *Times* reports that all the details of the work it is proposed to do with the view of maintaining the stones in a position of safety were fully discussed, and the representatives present unanimously approved all the suggestions made at the London conference. It was decided to proceed with the work as soon as the weather is favourable. It will be carried out under the supervision of Mr. Delmar Blow, assisted by an eminent civil engineer; and nothing in the way of restoration will be attempted. The only object the societies have in view is the preservation of this ancient memorial. The first work to be undertaken will be the raising of the huge monolith, which overhangs the altar stone and is in a most dangerous condition, into an upright position. It is the largest and finest monolith in England next to Cleopatra's Needle. At present it rests on a smaller stone, but there are two large flaws or cracks in it, and if it were to fall it is feared that it would be broken into three parts. The experts engaged in the work will next proceed to examine the stones numbered 6 and 7 on Mr. Petrie's plan, with the view of putting them in a position to support the lintel which rests upon them. The other recommendations of the societies will be carried out in due course; and, in the meantime, Sir E. Antrobus hopes to obtain permission to divert the roadway now passing through the earth-circle which surrounds the stones, and to proceed with the erection of the wire fence approved by the conference.

M. DE FONVIELLE, ex-president of the French Society for Aërial Navigation, delivered an address upon the position and progress of aëronautics in France, at a meeting of the Aëronautical Society held at the Society of Arts on Monday. In the course of the address, M. de Fonvielle referred to several important matters requiring the consideration of meteorologists, astronomers and others interested in scientific ballooning. One refers to the time at which the balloon ascents are made in connection with the International Aëronautical Committee. The balloons are sent up about eight o'clock in the morning, but M. de Fonvielle urged that a better plan would be to let the ascents be made at night, when less disturbing variations of temperature would be experienced. As manned balloons are sent up at the same time as free balloons, it was suggested that by making the ascents at night opportunity would be afforded of making astronomical observations which might be prevented at low levels by cloudiness. Another point which M.

de Fonvielle mentioned was that the ascents should not be made upon a particular day of the calendar month, as they are at present, but in the lunar month, by preference near the time of New Moon. The interference of moonlight with intended astronomical observations would thus be obviated.

DR. HERGESSELL, president of the International Aeronautical Committee, has sent us an account of the preliminary results of the international balloon ascents of March 7. Twelve unmanned balloons, three manned balloons and one kite were sent up from various places on the Continent, but the records of three of the unmanned balloons were lost. At Vienna a height of 10,000 metres was reached; the lowest temperature recorded was -62° C. At Moscow the temperatures recorded were -13° C. at starting, -20° at 4400 metres, and $-41^{\circ}6$ at 6650 metres. At Trappes, near Paris, one balloon reached 10,820 metres and recorded -43° ; the minimum temperature, $-51^{\circ}2$, was registered at 8792 metres. A second balloon registered $-43^{\circ}6$ at 10,481 metres and -53° at 8891 metres. At Strassburg a height of 10,000 metres was reached, and the minimum temperature recorded was -52° . Perhaps the most noteworthy record is that of a second balloon from Moscow, -12° at starting, -15° at 2700 metres; an inversion of temperature, $+2^{\circ}$, occurred at an altitude of 250 metres.

THE *Scientific American* states that there is a project on foot for the construction of a movable electric platform on the right bank of the Seine. The platform will be underground, and its length will be about six miles. The route proposed passes under the Avenue de l'Opera, the great boulevards, Boulevard Sebastopol, the Rue Turbigo and the Rue de Rivoli. The new scheme calls for four platforms instead of three, as was in use at the Paris Exposition. The first platform will be stationary, the second will have a velocity of $1\frac{1}{2}$ metres a second, the third 3 metres, and the fourth 5 metres. This will enable pedestrians to have a very rapid means of transit afoot in a portion of Paris which is greatly encumbered by vehicular traffic, for, as all the locomotion is in one direction, persons can walk very fast on the fourth platform, and will be able to cover a great distance. Some means of transit on the streets mentioned is so necessary that it is probable the scheme will be carried into effect.

THERE have been some discrepancies in recent allusions to the 1885 experiments carried out at Paris with the navigable balloon *La France*, Mr. Chanute, in the *Engineering Magazine*, April 1896, referring to speeds of 14 miles an hour, while Sir Hiram Maxim, in the *Aeronautical Journal*, October 1900, spoke of the speed as about 4 miles an hour, and only a single case of return to the point of departure. A note on this subject appears in the *Aeronautical Journal* for April, from which it appears that the balloon returned five times to its starting point. On referring to the original article in the *Comptes rendus* for 1886, we gather that the speed was estimated at from 4 to 6 metres per second, and probably the discrepancy was due to some confusion in regard to the units.

THE Botanical Exchange Club of the British Isles has just issued its annual report for 1899, from which we gather that the number of plants sent in shows a considerable falling off from the average of recent years. It is to be feared that the rival attractions of golf, photography and philately have diverted the attention of many who in former days devoted their spare time to the study of the British flora, and that modern facilities for attending science classes have hardly succeeded in maintaining the interest in field botany and natural history that was shown formerly. Still the report contains many records of interest, notably of the specific and varietal forms of the difficult genus *Rubus*, which have been studied by the Rev. W. Moyle Rogers,

while Mr. F. Townsend has commented on the forms of *Euphrasia*. The distributor (Rev. W. R. Linton) calls attention to the desirability of members sending not less than ten specimens of each plant, but we question whether a too literal interpretation of this recommendation might not lead to the total uprooting of certain rarities.

ALTHOUGH it has long been known that no actual gas obeys Boyle's law, attention has been chiefly centred round the divergencies which occur at high pressures. It is true that the behaviour of gases at low pressures has received attention from Siljeström, van der Ven, Mendelëeff, Amagat, Fuchs, Krajevitch, Baly and Ramsay and McLeod, and these experiments have led to the discovery of a discontinuity in the case of oxygen, but the experimental difficulties have led to considerable divergencies of results in other respects. An investigation is now described by Prof. A. Battelli in the *Nuovo Cimento* for January and February, which leads to the following results:—(1) Hydrogen obeys Boyle's law for pressures below one atmosphere down to about 0.2 mm.; (2) Air deviates slightly from the law between 2 and 5 mm.; (3) Oxygen exhibits a discontinuity about 0.7 mm.; (4) Carbonic anhydride at low pressures is compressed more than Boyle's law would indicate, probably owing to absorption by the walls of the containing vessel. With the exception of oxygen, and consequently air, the present investigation does not bring to light any anomalies not attributable to experimental conditions. On the other hand, the existence of discrepancies, representable by the introduction of a discontinuous function into the characteristic equation, is not incompatible with the kinetic theory, but may be attributable to changes in the grouping of the molecules.

THE Accumulator Industries Co. Ltd., has brought out a new primary cell, under the name of the "Cupron-Element," in which the electrodes are plates of zinc and copper oxide and the electrolyte caustic soda, or, for special purposes, caustic potash. The E.M.F. of this combination is low, amounting to only about 0.85 volt; but this is compensated for by a low internal resistance. It is claimed that the difficulties hitherto met with in the manufacture of a suitable anode (copper oxide) plate have been overcome, and that a coherent and, at the same time, highly porous plate has been obtained which can easily be regenerated when exhausted by simple exposure to the air. The cell has the advantage that there is no local action when on open circuit. To judge from the discharge curves printed in the catalogue, the cell has a high capacity and is capable of giving continuously a steady current. Of course, a primary battery with zinc as the ultimate source of energy can never be really a cheap way of getting current; but one which gives little trouble, is easily recharged and gives a good steady current, has a considerable range of utility, especially as a means of charging small accumulators.

To the March number of the *American Naturalist* Dr. W. H. Dall contributes an account of the morphology of the hinge-teeth of bivalve molluscs, in which the various systems of nomenclature for these structures that have been from time to time proposed are discussed and contrasted. Many problems in connection with the homology and evolution of these structures still await solution.

IN another paper in the *American Naturalist* for March Messrs. Wheeler and Long discuss the males of certain species of ants of the genus *Eciton*, with figures of several. These ants have the habit of seizing the larvæ and pupæ of other kinds of ants, as well as insects of other descriptions, and storing them up in their nests to serve for food as occasion requires. When the colony removes to another nest the booty is carried with the other *impedimenta*. And if *Eciton* ants be fed with termites

or the larvæ of other species, many of these termites or larvæ will be carried about or stowed away in some corner of the nest for several days before being consumed.

We are glad to learn, from its Report for the year 1900, that the Rugby School Natural History Society is in a flourishing condition and continues to make good progress. The requirements of its members render it essential that this body should not confine its investigations and its museum to local subjects, but it may be questioned whether a collection of Samoan ferns is entitled to form one of its exhibits. Two of the members of the Society are endeavouring to emulate Mr. Kearton in photographing the nests of birds in their natural situations, and, judging from the specimens published, may be congratulated on their efforts.

THE twentieth fasciculus of "Papers from the Harriman Alaska Expedition," now in course of publication in the *Proceedings* of the Washington Academy, deals with the nemertean worms, and is illustrated by an excellent coloured plate. During the summer of 1899 exceptionally favourable opportunities were enjoyed of collecting these worms on the Alaska coast south of Bering Sea, and the result has been to add very largely indeed to our knowledge of these organisms. Some thirty-two species were collected by the expedition, of which Dr. W. R. Coe describes no less than twenty-seven as previously unknown to science, while only two of the remainder had hitherto been recorded as denizens of the Pacific. No new generic types were found. For preserving these worms Dr. Coe reports that he found a solution of from two to five per cent. of formalin in sea-water gave satisfactory results so far as the preservation of external form is concerned, although it ruined the nerve and connective tissues.

IN the *Proceedings* of the Washington Academy of March 26 (vol. iii. pp. 111-138), Mr. G. S. Miller describes a collection of mammals made by Dr. W. L. Abbott in the Natuna Islands, lying between the Malay Peninsula and Borneo. Two collections of mammals from these islands have been previously described, the one by Messrs. Thomas and Hartert and the second by Mr. Thomas alone, the material having been obtained by Mr. A. Everett in 1893 and by Mr. E. Høse in the following year. The well-known energy of Dr. Abbott has added largely to the number of species obtained by these collectors, and Mr. Miller describes many of the acquisitions as new, among them being two species of chevrotain and a wild pig. With regard to a discussion that has taken place as to the relationships of the Natuna fauna, the present collection tends to show that there is a greater similarity between the mammals of the Malay Peninsula, Borneo and the intervening islands than has been hitherto supposed. Consequently there is little room for discussion as to whether the Natuna fauna comes nearer to that of the peninsula or of the large island.

IN its Report for the past year the Wellington College Natural Science Society directs attention to the efforts it has been making towards the revival of field work by the establishment of a field-club for the systematic investigation of the local fauna and flora within a twelve-mile radius. The project is worthy of all commendation as being the one important *raison d'être* of local natural history societies. And a special interest and importance attaches to such an investigation at the present time in the neighbourhood of the College. Six years ago the Society published local faunal lists compiled from the records of the previous twenty years. "During that time a great change came over the country just round the College; cultivation, drainage and building have all aided in destroying many plants and insects that used occasionally to be found; and these lists,

although interesting as bearing record as to what did occur at one time or another, are now necessarily incomplete; many of the finds are no longer to be found, whilst other and new ones have to be added." It is much to be desired that investigations of a similar nature should be undertaken in other parts of the country where analogous changes have taken place.

PART 4 of vol. xiii. (March 1901) of the *Proceedings* of the Cotteswold Naturalists' Field Club contains an elaborate and well-illustrated memoir by Dr. S. S. Buckman on "homœomorphy" among Jurassic brachiopods. By homœomorphy the author understands "the phenomenon of species nearly alike so far as superficial appearance is concerned, but unlike when particular structural details are closely examined. It is the phenomenon of similarity in general with dissimilarity in details." Dr. Buckman's views are too complicated to discuss in this column, but it may be mentioned that, in his opinion, much confusion has arisen in the description of Jurassic brachiopods owing to failure in recognising the phenomenon in question. To the same publication the Rev. A. R. Winnington-Ingram contributes some notes on polydactylism in cats. The family to which he refers have a cross of the Manx breed, and the supernumerary digits are attributed to reversion to polydactylous ancestors intermediate between fishes and amphibians.

THE way in which the American Anthropological Museums are growing is a continual source of congratulation and at the same time of envy on our part and regret that there is such indifference to the science in Britain. To give one instance of the example set by our American friends, Dr. G. A. Dorsey informs us in *Science* (n. s., vol. xiii. p. 219) that in 1897 the Hopi collection of the Field Columbian Museum for Chicago was comprised within three cases. Thanks to Dr. Dorsey's representations, Mr. Stanley McCormick was induced to purchase for the Museum a very extensive collection formed by Mr. H. R. Voth, who has long been a missionary among the Hopi. Then, in order to render the exhibit exhaustive, Mr. McCormick, with characteristic American generosity, provided the funds for four expeditions which have very successfully investigated the archaeology of the Hopi country, with the result that two halls in the Museum containing thirty-four cases are devoted to a demonstration of the ordinary everyday life of the Hopi and their past culture, and a third hall will shortly be filled. The most valuable exhibits are reproductions of nine of the underground altars, with their sand mosaics, which play so important a part in the great nine-day ceremonies of these interesting people. We have nothing in the whole British Empire to compare with this!

DR. THORODDSEN contributes to *Petermann's Mitteilungen* a paper on the earthquakes which occurred in Iceland in August and September 1896. In order to collect material for this report the author first addressed inquiries to a number of residents in the district affected—the southern lowland of Iceland—and in 1897 made an examination on the spot. Dr. Thoroddsen has been able to locate with considerable precision the region of greatest intensity of disturbance, and finds that, as in former cases, the chief centre of origin lay near the boundary between the subsiding lowland and the surrounding highland. The disturbance was, therefore, of tectonic origin; the volcanoes in the neighbourhood—Hekla, Katla and Eyjafjallajökull—remained passive during and after the earthquake shocks.

THE *Geographical Journal* for April contains an analysis of the physical geography of South America, by Col. G. E. Church. The paper, which is to form the introductory chapter of a book on the subject, gives a close comparison of the conditions in North and South America, and shows that "in general, man finds himself confronted by severe conditions in his struggle with

nature in South America. Thus far his efforts to develop and utilise its vast resources have made its commercial history an epic. The thought naturally presents itself that had North America fallen to the lot of the Latin race in the European occupation of the New World, and South America to the Anglo-Saxon, the former might still have maintained its old supremacy; for the more rapid progress of the latter may not be due so much to racial superiority as to advantageous geographical surroundings."

THE list of additions to the library of the Royal Gardens, Kew, received during last year, occupies eighty-three pages in the *Kew Bulletin* (Appendix ii. 1901) just issued. The titles are printed on one side of the page only, so as to allow the list to be cut up and the slips used by persons and institutions having catalogues based on the Kew catalogue.

ANNOUNCEMENT has just been made by a committee of American anthropologists, of which Mr. F. W. Hodge, managing editor of the *American Anthropologist*, is secretary, of the proposed publication of an illustrated volume containing more than thirty folk-tales which were collected and translated by the late Frank Hamilton Cushing during his long and intimate association with the Zuni Indian tribe of New Mexico. Information and subscription forms may be obtained from the secretary, whose address is Washington, D.C., U.S.A.

THE third divisional volume has been received of Thompson's "Gardener's Assistant," a new edition of which, edited by Mr. William Watson, assistant curator at the Royal Gardens, Kew, is in course of publication by the Gresham Publishing Company. Among the subjects dealt with are popular garden plants, greenhouse and conservatory, greenhouse plants, stove plants, orchids, indoor and hardy ferns, succulent plants, hardy shrubs, bedding and floral decorations. Several plates and numerous excellent illustrations accompany the descriptive text.

A LARGE terrestrial globe is an essential piece of furniture for the satisfactory teaching of geography. The ideal globe is in relief, but the price at which such a globe can be well produced is prohibitive to its extensive use. A large globe in which physical features are given prominence is the next best substitute, and this has been produced by Messrs. Philip and Son under the title of "Philip's Physical School Globe." The diameter is nineteen inches, and three forms of mounting of the globe are constructed, namely, one a pedestal for table, another the same with the addition of a graduated half meridian, and the third a tripod stand, with complete meridian and horizon.

THE following prices obtained for some of the natural history books from the library of the late Mr. P. Crowley, sold by Mr. J. C. Stevens at his auction rooms on Monday, are of interest:—"Transactions of the Entomological Society," complete set, 46 vols., 38*l*.; "Catalogue of the Birds in the British Museum," vols. 1 to 27, 1874-95, 48*l*.; "The Ibis," 1859 to 1900, with indexes, 42 vols., 75*l*.; "Proceedings of the Zoological Society," 1830 to 1900, 60 vols., 60*l*.; "The Birds of the British Islands," by Lord Lilford, 7 vols., 63*l*.; "Biologia Centrali Americana," 35 vols., 90*l*.; "Birds of Europe," by H. E. Dresser, vols. 1 to 8, 1871-1881, vol. 9 supplement, 1895-6, 56*l*.; "Histoire Physique, Naturelle et Politique de Madagascar," by A. Grandidier, 1875-95, 35*l*.; "The Birds of Asia," by John Gould, 7 vols., 1850-1883, 51*l*.; "The Birds of New Guinea, Papuan Islands and Australia," by J. Gould, 5 vols., 1875-78, 45*l*.; "The Birds of Great Britain," by John Gould, 5 vols., 1863, 49*l*.; "Monograph of the Pheasants," by D. G. Elliot, 2 vols., 1872, 53*l*.; "Rough Notes on the Birds observed during Twenty-five Years' Shooting and Collecting in the British Islands," by E. T. Booth, 3 vols., 1881-7, 25*l*.

NO. 1642, VOL. 63]

THE additions to the Zoological Society's Gardens during the past week include a Macaque Monkey (*Macacus cynomolgus*) from India, presented by Mr. C. L. Lane; a Mozambique Monkey (*Cercopithecus pygerythrus*) from East Africa, presented by Miss Leah Simmons; a Rufous-necked Scimitar Babbler (*Pomatorhinus ruficollis*), a Golden-backed Woodpecker (*Brachypternus aurantius*) from India, presented by Mr. E. W. Harper; an Indian Python (*Python molurus*) from India, presented by Mr. C. Oscar Gridley; a Chameleon (*Chamaeleon vulgaris*) from North Africa, presented by Mr. C. King; ten Indian Cobras (*Naia tripudians*) from India, ten Reeve's Terrapins (*Damonia reevesi*) from China, ten Roofed Terrapins (*Kachuga tectum*) from British India, ten Blue Lizards (*Gerrhonotus coeruleus*), six Red Newts (*Sperlepes rubra*) from North America, a Red-fronted Lemur (*Lemur rufifrons*) from Madagascar, deposited; an English Wild Cow (*Bos taurus*), a Bactrian Camel (*Camelus bactrianus*), born in the Gardens.

OUR ASTRONOMICAL COLUMN.

NOVA PERSEI.—*Bulletin* No. 16 of the Yerkes Observatory contains a report from Prof. Hale on the work done in connection with the new star in Perseus. An examination of the Nova with the 40-inch refractor on February 24 failed to show any trace of nebulosity. Photographs of the spectrum were obtained on eight nights, using Erythro plates, with spectrographs of one and three prisms respectively. These extend from H_α in the red to the ultra-violet H_γ; comparison spectra were taken of titanium, hydrogen and sodium. Photographs of the region of the Nova have been obtained with the 40-inch telescope, and will be subsequently measured at Columbia College Observatory. The brightness of the star has been measured by the wedge photometer.

A REMARKABLE GROUP OF NEBULOUS SPOTS.—Prof. Max Wolf, of Heidelberg, writes to the *Astronomische Nachrichten* (Bd. 155, No. 3704), describing an appearance of small nebulous bodies surrounding the star

$$\left. \begin{array}{l} \text{R.A.} = \quad \text{h. m.} \\ \quad \quad 12 \quad 52.6 \\ \text{Decl.} = + 28^{\circ} \quad 42' \end{array} \right\} (1855^{\circ}).$$

They are so close together as to form a remarkable feature in the field of view. He was able to count 108 in a circle about 30' of arc in diameter. Some of the fourth or fifth magnitude showed a central condensation, more or less elongated, while other fainter ones had a roundish form.

STONYHURST COLLEGE OBSERVATORY.—The annual summary of the meteorological, magnetical and other observations made at the Stonyhurst Observatory in Lancashire has just been issued by the director, Father Sidgreaves. Special co-operation with the International Meteorological Committee has been in force since November, observations of clouds and wind being made throughout three successive days of each month; on the second of these days balloon ascents are made by representatives of the Committee.

The work of comparison between individual sun-spots and terrestrial magnetic storms has been concluded and published in the *Memoirs* of the Royal Astronomical Society. This covers the period of eighteen years from January 1881 to December 1898.

Experiments are in progress in connection with the improvement of the present means of obtaining stellar spectra, quartz lenses being now employed, so that more of the ultra-violet region will be photographed.

CATALOGUE OF DOUBLE STARS.—Vol. i. of the *Publications* of the Yerkes Observatory consists of a general catalogue of 1290 double stars, discovered from 1871-1899 by Prof. S. W. Burnham. The stars are arranged in order of their right ascensions, full particulars being given of all the micrometrical measures of each pair. The work has been done with telescopes varying from 6 inches to 40 inches in aperture, the greater number (451) of the discoveries having been made with the smallest instrument.